The states of consciousness conference in Switzerland with Miroslaw Magola alias Magnetic Man

Consciousness is one of the most fascinating and debated topics in philosophy, neuroscience, psychology, and cognitive science. At its core, consciousness refers to the state of being aware of and able to think about oneself, one's surroundings, and one's experiences. However, defining it precisely is challenging because it encompasses subjective experience, self-awareness, perception, and the ability to feel and think.

States of consciousness worldwide lecture series.

The brain and consciousness are vast and complex topics, and while we've uncovered much, they still hold many mysteries.

Brain: The brain is an intricate organ responsible for processing, interpreting, and responding to information from our bodies and the environment. Here's what we've learned:

It contains billions of neurons connected by synapses, forming elaborate networks for communication.

The brain operates via electric and chemical signals, enabling thought, emotion, and movement.

Specific regions handle different functions: the cortex for higher-order processes like reasoning, the

limbic system for emotions, and the brainstem for basic survival tasks.

It's highly adaptable, capable of reorganizing its functions after injury—this is known as neuroplasticity.

However, the brain's full potential and mechanisms, such as memory storage and creativity, remain incompletely understood.

Consciousness: Consciousness is the state of awareness of oneself and the world. Scientists and philosophers continue to debate how it arises. Here's what we know:

It likely stems from complex brain activity, but the transition from neural processes to subjective experiences (the "hard problem of consciousness") is unexplained.

Theories include Global Workspace Theory, suggesting consciousness emerges from widely shared information across the brain, and Integrated Information Theory, which connects consciousness to informational complexity.

Researchers have identified neural correlates linked to conscious experiences using tools like EEG and fMRI.

Questions and Challenges:

Why are we conscious? What purpose does consciousness serve in evolution?

Can consciousness exist outside of biological brains? This includes debates around artificial intelligence and machine learning.

What is the self? How do we maintain a sense of identity over time?

Both fields inspire exciting new research, but they remind us how much remains to explore. Which aspect of these mysteries fascinates you most?

Key Aspects of Consciousness:

Subjective Experience (Qualia) – The "felt" quality of experiences, such as how it feels to see the color red, taste chocolate, or feel pain. This is often called qualia and is deeply personal.

Self-Awareness – The recognition of oneself as an individual separate from the environment and others. This includes the ability to reflect on one's own thoughts (meta-cognition).

Attention & Perception – The ability to focus on specific stimuli while filtering out others, shaping our conscious experience.

Integration of Information – The brain combines sensory inputs, memories, and thoughts into a unified experience (sometimes called the "binding problem").

Wakefulness vs. Conscious Content – Being awake (a state of consciousness) is different from the actual content of consciousness (e.g., thoughts, perceptions).

Theories of Consciousness:

Dualism (e.g., Descartes) – Consciousness is separate from the physical brain (a non-material "mind" or soul).

Materialism/Physicalism – Consciousness arises entirely from physical processes in the brain.

Panpsychism – Consciousness is a fundamental property of all matter, to varying degrees.

Integrated Information Theory (IIT, Tononi) – Consciousness emerges from the complexity of information integration in the brain.

Global Workspace Theory (Baars, Dehaene) – Consciousness arises when information is broadcast across brain networks for widespread access.

Why Is Consciousness Hard to Explain?

The "hard problem" (coined by David Chalmers) asks why and how physical processes in the brain give rise to subjective experience. Science can describe neural correlates of consciousness (brain activity linked to experience), but not yet why we "feel" anything at all.

It's inherently subjective—we can't directly observe another being's consciousness, only infer it.

Artificial Consciousness: ?